

# COUNCIL REPORT



**AGENDA:** May 10, 2011

**5.2**

**CATEGORY:** Public Hearing

**DEPT.:** Public Works

**TITLE:** Adoption of 2020 Urban Water Use Target Methodology

## **RECOMMENDATION**

Adopt A RESOLUTION APPROVING THE USE OF METHOD 4: WATER SAVINGS TO DETERMINE THE CITY OF MOUNTAIN VIEW'S 2020 URBAN WATER USE TARGET AND 2015 INTERIM URBAN WATER USE TARGET, to be read in title only, further reading waived.

## **FISCAL IMPACT**

There is no fiscal impact from approving the use of *Method 4: Water Savings* to determine the City's 2020 and 2015 water use targets. The City may incur undetermined costs for developing or participating in water conservation programs necessary to meet these targets.

## **BACKGROUND AND ANALYSIS**

The Water Conservation Act of 2009 requires each urban retail water supplier in California to develop a water use target for the year 2020 as part of a cooperative effort to help reduce California's State-wide per capita water use by 20 percent by the year 2020. Each retailer's 2020 urban water use target must be reported in its 2010 Urban Water Management Plan (UWMP), along with its base daily water use and "interim" water use target for 2015. While retailers must adopt an approach for calculating targets in their 2010 UWMP, they may modify their approach any time before the end of 2015, at which point eligibility for State water management funding becomes conditioned upon meeting the 2015 and 2020 targets. Retailers that do not meet the water use targets will not be eligible for water management grants or loans, unless a viable implementation plan is approved by the funding agency.

As an urban retailer, the City of Mountain View is required to conduct a public hearing to:

1. Approve a method for determining its urban water use target;
2. Allow community input regarding the retailer's implementation plan for meeting its urban water use target; and
3. Consider the economic impacts of the retailer's implementation plan for meeting its urban water use target.

### Base Daily Water Use

The initial step in developing a 2020 water use target is establishing base consumption. Retailers may choose any 10 consecutive years between 1995 and 2010 for their base period. Based on Mountain View's historical population and water use, staff recommends using a base period of 1995 to 2004, which yields a base water use of 180 gallons per capita per day (gpcd). This period yields the highest possible base daily water use, which equates to the highest (and, therefore, most conservative) urban water use target.

### Urban Water Use Target

There are four methods available for setting an urban water use target:

- Method 1: 80 percent of the base daily per capita water use.
- Method 2: Performance standards-based water budget.
- Method 3: 95 percent of a regional target, set by the Department of Water Resources.
- Method 4: Water savings estimates for replacement of plumbing fixtures.

Staff calculated the City's potential urban water use target using three methods (Method 1, 3 and 4). Since very specific landscape data is needed to calculate a target using Method 2, this method is unavailable to Mountain View. Based on the analysis of the three available methods (Table 1), staff recommends using Method 4 to develop Mountain View's 2015 and 2020 water use targets since it yields the highest (and most conservative) targets for 2015 and 2020.

**Table 1: Urban Water Use Target Analysis Results**

Target Method	Base Daily Water Use (gpcd)	2015 Interim Water Use Target (gpcd)	2020 Urban Water Use Target (gpcd)
Method 1—80% Baseline	180	162	144
Method 2—Performance Standards	180	—	—
Method 3—95% Regional Target	180	156	131
Method 4—Water Savings	180	163	146

### Current Water Use

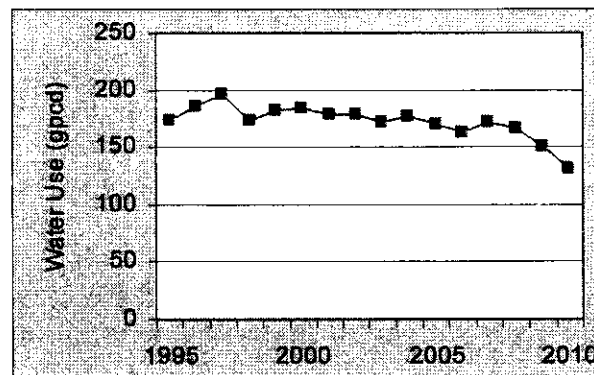
Mountain View's per capita water use in 2010 was approximately 132 gpcd. Based on this usage, it might appear that Mountain View has already met its future targets. However, it is

important to consider unique occurrences from 2010 that may have temporarily decreased water use and to understand how growth affects future per capita water use. For example:

- 2010 was the first wet year following a three-year drought and many customers temporarily reduced their water use in response to the drought.
- The slow economy is believed to have temporarily decreased water use in 2010, with residents and businesses cutting costs to save money.
- Since per capita water use is calculated as total water use divided by population, growth in nonresidential sectors will increase Mountain View's per capita water use because consumption increases but not population.

Figure 1 shows Mountain View's per capita water use between 1995 and 2010, illustrating how low 2010 water use was compared to prior years.

Figure 1: Historical Water Use



#### Basis for Water Use Projections

The City uses a demand and conservation model (DSS model) to estimate future water use. The DSS model is an end-use model that projects future water use based on "base-year" water demand, projected future growth in customer accounts and projected future implementation of demand reduction measures. Consistent with other neighboring water agencies, Mountain View's model used 2001 as its base year because 2001 is generally considered to represent normal rainfall and historic demand. Future growth was estimated based on the preferred alternative of the 2030 General Plan. Demand reduction measures included in the model are described briefly below.

- *Plumbing Code:* Recent changes to the Plumbing Code require the installation of high-efficiency fixtures and limit the manufacturing of nonefficient plumbing fixtures.

These changes will reduce water use over time as new and renovated buildings become increasingly water-efficient.

- *Recycled Water:* Based on long-term recycled water use projections, Mountain View's recycled water use in the North Bayshore Area is expected to offset an increased volume of potable water by up to 1,600 acre-feet in 2020.
- *Water Conservation:* Water conservation measures included in the DSS model through 2020 are those measures currently being implemented within the City, but to a greater degree.

#### Plan for Meeting 2020 Urban Water Use Target

Mountain View expects per capita water use to increase in future years due to new development, a recovering economy and as regional rainfall returns to normal. Despite this expected increase, the City can meet its water use targets by continuing or expanding three programs that are already in place:

- Continued enforcement of water-efficient regulations affecting new construction and renovations (such as the newly adopted Green Building Code);
- Continued conversion of irrigation customers in the North Bayshore Area from the potable water system to the recycled water system; and
- Continued implementation of water conservation programs, including outreach, education and financial incentives.

As shown in Table 2, Mountain View's current DSS model indicates that Mountain View will meet its 2020 water use target if the measures listed above are implemented.

**Table 2: Projected Daily Water Use**

Water Model Scenario (demand reduction measures implemented)	Projected Per Capita Water Use (gpcd)	
	2015	2020
Scenario A (Base-Case)	165	169
Scenario B (Plumbing Codes)	159	159
Scenario C (Plumbing Codes and Recycled Water)	147	141
Scenario D (Plumbing Codes and Conservation)	154	153
Scenario E (Plumbing Codes, Recycled Water and Conservation)	142	135
Draft Interim and Urban Water Use Targets	163	146

With continued efforts toward recycled water use and conservation, staff anticipates that Mountain View will be able meet its targets.

### Regional Water Use Targets

Retailers may choose to meet their water use targets individually or through a regional alliance. The regional approach provides a "back-up" to the individual approach because it provides two options for compliance: (1) if the region as a whole meets its targets; or (2) if Mountain View meets its individual targets. Staff will continue to research options for regional compliance and will return to the Council for authorization to participate in a regional approach, if it is determined to be beneficial to the City.


### ALTERNATIVES

If the City Council does not approve Method 4, the City could use Method 1 or Method 3. Staff recommends Method 4 because it provides the highest (and most easily met) target and is, therefore, the least likely to jeopardize the City's eligibility for water management grant and loan funding from the State.

### PUBLIC NOTICING

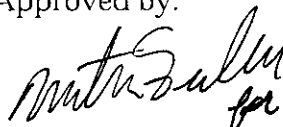
Notice of this public hearing was published in the *San Jose Post Record* and *Mountain View Voice* and mailed to interested stakeholders. The meeting agenda was advertised on Channel 26 and the agenda and staff report were posted on the City's web site at [www.mountainview.gov](http://www.mountainview.gov).

Prepared by:



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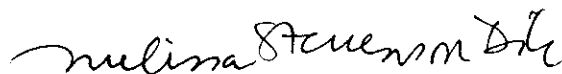
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CITY OF MOUNTAIN VIEW  
RESOLUTION NO.  
SERIES 2011

A RESOLUTION APPROVING THE USE OF METHOD 4: WATER SAVINGS  
TO DETERMINE THE CITY OF MOUNTAIN VIEW'S 2020 URBAN WATER  
USE TARGET AND 2015 INTERIM URBAN WATER USE TARGET

WHEREAS, the City of Mountain View recognizes the importance of water conservation and is committed to promoting and practicing the sustainable use of its water resources; and

WHEREAS, the California Legislature enacted the Water Conservation Act of 2009 to reduce State-wide urban water use by 20 percent by the year 2020, which requires each urban retail water supplier to develop an urban water use target for the year 2020 and an interim urban water use target for the year 2015; and

WHEREAS, the City as an urban retail water supplier must adopt one of four methods outlined in the California Water Code for determining urban and interim urban water targets; and

WHEREAS, the City has considered each of the four methods for calculating its urban and interim urban water targets; and

WHEREAS, the fourth method outlined in the California Water Code (Method 4: Water Savings) is based on estimated savings resulting from residential high-efficiency plumbing fixtures and other conservation programs.

NOW, THEREFORE, BE IT RESOLVED that the City of Mountain View:

1. Adopts Method 4: Water Savings, as outlined in California Water Code Section 10608.20(b), to determine the City of Mountain View's urban water use target.
2. Authorizes the urban water use target determined by Method 4: Water Savings for use in the City of Mountain View's 2010 Urban Water Management Plan.

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